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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/534,460	05/11/2005	Takatoshi Kato	M1071.1931	7019
32172	7590	10/16/2006	EXAMINER	
DICKSTEIN SHAPIRO LLP			LEE, BENNY T	
1177 AVENUE OF THE AMERICAS (6TH AVENUE)			ART UNIT	
NEW YORK, NY 10036-2714			PAPER NUMBER	
			2817	

DATE MAILED: 10/16/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	Application No. 10/534,460	Applicant(s) KATO ET AL.	
	Examiner Benny Lee	Art Unit 2817	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

#### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) ☒ Responsive to communication(s) filed on 27 September 2006.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4) ☒ Claim(s) 1-6 is/are pending in the application.
- 4a) Of the above claim(s) 3 is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1,2 and 4-6 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☒ Claim(s) 1-6 are subject to restriction and/or election requirement.

#### Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 11 May 2005 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)  | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)   | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date <u>11 May 2005</u> | 6) <input type="checkbox"/> Other: _____  |

Applicant's election with traverse of the restriction requirement in the reply filed on 27 September 2006 is acknowledged. The traversal is on the ground(s) that the elected Group I invention can only be made by the method of the Group II invention. In particular, it has been argued that any other currently known manufacturing process would cause large variations in positional relationship of the coupled line pattern segment and the notch upon application of a dicing process. This is not found persuasive because the criterion for restriction was that the apparatus could have been made by a materially different process, such as molding the dielectric substrate to the desired shape, as to include the notch. As such, a review of independent apparatus claim 1 shows no recitations of the features alluded by applicants' in their traverse, as to require only the use of the Group II process in forming this apparatus. In fact, the claimed recitations merely recite the coupling line pattern and notch in a generic sense, and as such the formation of such features by a molding process certainly would have been within the purview of one of ordinary skill in the art.

The requirement is still deemed proper and is therefore made FINAL.

Claim 3 is withdrawn from further consideration pursuant to 37 CFR 1.142(b), as being drawn to a nonelected invention, there being no allowable generic or linking claim. Applicant timely traversed the restriction (election) requirement in the reply filed on 27 September 2006.

The disclosure is objected to because of the following informalities: In paragraph [0012], note that "are deviated" should be rewritten as --deviate-- for a proper characterization. In replacement paragraph [0015], second line therein, note that --a-- should be inserted after "realize" for grammatical correctness. In replacement paragraph [0026], note that "Figs. 1A to 4" should be rewritten as --Figs. 1A-1C, 2A-2C, 3 and 4-- for a proper characterization. In

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replacement paragraph [0027], fifth and sixth lines therein, note that “22 to 26” and “27 to 29” should be respectively rewritten as --22, 23, 24, 25, 26-- and --27, 28, 29-- for consistency with the labeling in the corresponding drawing figure; fifth to seventh lines therein, note that this description should reference --Fig. 1A-- for consistency of description with the drawing figure. In paragraph [0029], note that reference labels (15k, E2) should reference --Fig. 1B-- for consistency of description with the drawing figure. In paragraph [0030], note that --(Fig. 1C)-- should follow “via holes V” for consistency of description with the drawing figure. In Paragraph [0033], note that --(Fig. 2C)-- should follow “plane ES” for consistency of description with the drawing figure. In paragraph [0034], note that “FIG. 1” should properly reference --FIG. 1B-- for a proper characterization. In paragraph [0035], note that “FIG. 1” should properly reference --FIG. 1A-- for a proper characterization. In replacement paragraph [0039], second line therein, note that --as shown in Fig. 1B-- should follow “16” for consistency of description with the drawing figure; third line therein, note that “Fig. 1A” should properly reference --Fig. 8-- for a proper characterization. In replacement paragraph [0047], note that “VL0 to VL4’ and HL0 to HL4” should be rewritten as --VL0, VL1’, VL1, VL2’, VL2, VL3’, VL3, VL4’ and HL0, HL1, HL1’, HL2, HL2’, HL3, HL3’, HL4-- for consistency with the labeling in the drawing figure. In paragraphs [0051] to [0059], note that for the specific dimensional parameters, such parameters should reference those drawing figures in which they appear (e.g. “w” appears in --Fig. 1C--, etc). Appropriate correction is required.

The disclosure is objected to because of the following informalities: Note that the following reference labels need a corresponding description in the specification: Fig. 1A (A1, A2); Fig. 6 (22(15), 23(14), 27). Appropriate correction is required.

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The drawings are objected to because in Fig. 4, reference label --3-- needs to be provided as to be commensurate with the specification description thereof.

Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as "amended." If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

The following claims have been found to be objectionable for reasons set forth below:

In claim 1, line 5, note that "formed" should be rewritten as --disposed-- for an appropriate characterization.

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1, 2, 4-6 are rejected under 35 U.S.C. 102(b) as being clearly anticipated by Ishikawa et al.

With regard to claims 1, 4-6, Ishikawa et al (Fig. 4) discloses a line transition between a planar circuit line and a waveguide comprising: a dielectric substrate (12); a waveguide comprised of a solid dielectric portion (10) and conductive plates (13, 14) which sandwich the solid dielectric portion (10) into a three dimensional space. The substrate (12) includes a

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conductive pattern (e.g. 15, 16) disposed thereon and includes a coupled line pattern segment (e.g. conductive line 15) adjacent the solid dielectric portion (10) to provide electromagnetic coupling therewith and a planar transmission line segment pattern (i.e. the portion of conductive line 15 adjacent the ground layers 16) extending from the coupled line pattern for coupling to the signal to/from the coupled line segment. Note that the dielectric substrate (12) is disposed in the middle of the waveguide with a horizontal orientation, which is parallel to the E plane of the waveguide, as would have been known to those of ordinary skill in the art. Note that adjacent right angle edges of the dielectric substrate, which define a corner portion adjacent to the solid dielectric portion (10), as to define a "notch" in the dielectric substrate, which is in the vicinity of the coupled line pattern (15). Moreover, note that the "notch" (i.e. the corner portion) includes a side edge which is oriented parallel to the signal propagation direction of coupled line portion (15) and as is readily apparent from Fig. 4, is greater than the width of the E plane of the electromagnetic wave ~~confined~~ which is confined within the solid dielectric portion (10). With regard to claim 2, it should be noted that the line transition of Fig. 4 would have been capable of use in a high frequency module application (e.g. such as those uses taught by Figs. 6(A), 16, etc) in view of the general teaching at col 1, lines 14-17, which recognizes that the dielectric line transition is suitable for use in an integrated circuit. As known to those of ordinary skill in the art, an integrated circuit (including the Fig. 4 line transition) necessarily would have been considered to have been a part of "a high frequency module".

Applicants' are advised that for consideration of the prior art documents cited in the international search report, applicants' need to provide copies of such documents to the examiner

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to satisfy the requirements needed for consideration. Accordingly, these citations have been crossed through in the Information Disclosure Statement filed 11 May 2005.

Any inquiry concerning this communication should be directed to Benny Lee at telephone number 571 272 1764.

B. Lee

A handwritten signature in cursive script, reading "Benny Lee". The signature is written in black ink and is positioned above the printed name and title.

BENNY T. LEE  
PRIMARY EXAMINER  
ART UNIT 2817